UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/786,078	02/26/2004	Akira Isogai	11-228	3541

23400 7590 07/28/2004

POSZ & BETHARDS, PLC
11250 ROGER BACON DRIVE
SUITE 10
RESTON, VA 20190

EXAMINER	
TO, TUAN C	

ART UNIT	PAPER NUMBER
3663	

DATE MAILED: 07/28/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/786,078	ISOGAI ET AL.	
	Examiner	Art Unit	
	Tuan C To	3663	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *26 February 2004*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-8* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1* is/are rejected.

7)☒ Claim(s) *2-8* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *26 February 2004* is/are: a)☐ accepted or b)☒ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☒ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date *02/26/2004*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.
>
> (e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

Claim 1 is rejected under 35 U.S.C. 102(e) as being anticipated by Friederich et al. (U.S. 6624747B1).

With respect to claim 1, the U.S. reference to Friederich et al. has been cited as teaching a vehicle system for preventing a collision between a vehicle and an obstacle existing ahead. Said an obstacle can be another vehicle traveling in its front. According to Friederich et al., said vehicle system includes a sensor (10) for detecting the acceleration/deceleration of the vehicle. There are at least one sensor for detecting the headway between the vehicle and another vehicle (obstacle) located in front of the vehicle, at least one sensor for detecting the relative speed between said vehicles (Friederich et al. column 2, lines 57-67; column 3, lines 1-15; figure 1). Friederich et al. teach that the maximum braking deceleration is calculated as the function of the sensor signals generated from

the sensor devices discussed above, and said the maximum deceleration is calculated until the relative speed assumes the value zero (Friederich et al., column 2, lines 57-59). As a result, a possible collision with the target vehicle is avoided. Referring to figure 1 of Friederich et al., the control unit (60) outputs a command signal to activate the braking operation in response to the input signals from said sensor devices, including the deceleration signal from the sensor device. The computing unit (60) also determines whether the degree of overlap exceeds a predetermined limit (Friederich et al., column 4, lines 33-37).

Allowable Subject Matter

The examiner has searched all the possible areas that are relevant to the present application, but none of references, either alone or in a combination, discloses the following:

a. determining the target collision avoidance deceleration G according to an equation below $G = Vr^2 / \{(2 X (D - Dfn)\} - Ka X Af$, where Vr is the relative speed between the system vehicle and the target object, D is a distance to the target object, Dfn is a minimum distance to the target object that is to be reserved when the relative speed Vr becomes zero (0), Af is acceleration of the target object, and Ka is a gain"

b. The collision avoidance control system, wherein "the target collision avoidance deceleration exceeds a pre-selected alarm activating threshold value, said control circuit activates an alarm to output an alarm signal, when the target collision avoidance deceleration decreases below a pre-selected alarm

deactivating threshold value, said control circuit deactivating the alarm to stop the alarm signal"

c. The collision avoidance control system, wherein "a travel control apparatus working to determine a target acceleration as functions of a distance to the target object and the relative speed and to decelerate or accelerate the system vehicle based on the target acceleration to control a travel condition of the system vehicle, and wherein the alarm activating threshold value is identical with a maximum deceleration controllable by the travel control apparatus"

d. The collision avoidance control system, wherein "when the target collision avoidance deceleration exceeds a pre-selected deceleration control activating threshold value, said control circuit performs deceleration control to decelerate the system vehicle, when the target collision avoidance deceleration decreases below a pre-selected deceleration control deactivating threshold value, said control circuit deactivating the deceleration control"

For that reason, claims 2-8 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusions

The prior art made of record, which are listed in PTO-892, and not relied upon are considered pertinent to applicant's disclosure includes the following: Matsuda et al.'s, Nakamura et al.'s, Igaki et al.'s, and Bullinger et al.'s.

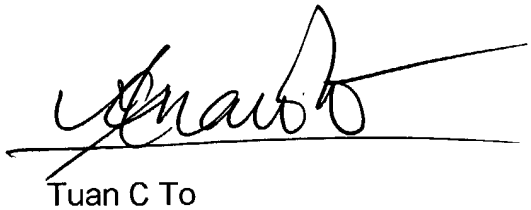
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tuan C To whose telephone number is (703) 308-6273. The examiner can normally be reached on from 8:00AM to 5:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Thomas Black can be reached on (703) 305-8233.

The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Patent Examiner,



Tuan C To

Date: July 23, 2004